

What is Claimed is:

1. A stain removing chewing gum composition comprising a gum base and a stain removing complex of a stain removing agent and a cyclodextrin compound
5 wherein said stain removing agent is present in a manner which enables an effective amount of the stain removing agent to be released from the chewing gum composition to achieve a stain removing effect on dental surfaces.
2. The stain removing chewing gum composition of claim 1 wherein the
10 cyclodextrin compound is selected from the group consisting of α -cyclodextrin, β , and γ -cyclodextrin, derivatives thereof and combinations thereof.
3. The stain removing chewing gum composition of claim 2 wherein the
15 cyclodextrin compound is selected from the group consisting of hydroxypropyl β -cyclodextrin, hydroxyethyl β -cyclodextrin, hydroxypropyl β -cyclodextrin, hydroxyethyl β -cyclodextrin, methyl β -cyclodextrin and combinations thereof.
4. The stain removing chewing gum composition of claim 1 wherein the
20 molar ratio of the stain removing agent to the cyclodextrin compound is from about 1:0.1 to 1:10.

5. The stain removing chewing gum composition of claim 4 wherein the molar ratio of the stain removing agent to the cyclodextrin compound is from about 1:0.5 to 1:5.

5 6. The stain removing chewing gum composition of claim 5 wherein the molar ratio of the stain removing agent to the cyclodextrin compound is about 1:1.

7. The stain removing chewing gum composition of claim 1 wherein the stain removing complex is present in an amount of from about 0.001% to 20% by weight
10 based on the total weight of the chewing gum composition.

8. The stain removing chewing gum composition of claim 7 wherein the stain removing complex is present in an amount of from about 0.1% to 15% by weight based on the total weight of the chewing gum composition.

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9. The stain removing chewing gum composition of claim 1 wherein the amount of the cyclodextrin compound is sufficient to complex with the effective amount of the stain removing agent.

20 10. The stain removing chewing gum composition of claim 1 wherein the stain removing agent is present in an amount of from about 0.01% to 20% by weight based on the total weight of the chewing gum composition.

11. The stain removing chewing gum composition of claim 10 wherein the stain removing agent is present in an amount of from about 0.1% to 10% by weight based on the total weight of the chewing gum composition.

5 12. The stain removing chewing gum composition of claim 1 wherein the stain removing agent is selected from the group consisting of medium and long chain fatty acids, organic acids, organic peroxides, perbenzoic acids, anti-bacterial organic compounds, castor oil, sulfated butyl oleate, medium and long chain fatty acid esters, ricinoleic acid and salts thereof, sodium oleate, salts of fumaric acid, potassium
10 glomate, organic acid esters of mono and diglycerides, succistearin, dioctyl sodium sulfosuccinate, glycerol tristearate, lecithin, hydroxylated lecithin, sodium lauryl sulfate, acetylated monoglycerides, succinylated monoglycerides, monoglyceride citrate, ethoxylated mono- and di-glycerides, sorbitan monostearate, calcium stearyl-2-lactylate, sodium stearyl lactylate, lactylated fatty acid esters of glycerol and propylene glycerol,
15 glycerol-lactoesters of C₈-C₂₄ fatty acids, polyglycerol esters of C₈-C₂₄ fatty acids, propylene glycol alginate, sucrose C₈-C₂₄ fatty acid esters, diacetyl tartaric or citric or lactic acid esters of mono- and di-glycerides, and triacetin and combinations thereof.

20 13. The stain removing chewing gum composition of claim 1 wherein the stain removing agent is selected from the group consisting of glycerol-lactoesters of C₁₄-C₂₀ fatty acids, polyglycerol esters of C₁₄-C₂₀ fatty acids, and sucrose C₁₄-C₂₀ fatty acid esters.

14. The stain removing chewing gum composition of claim 1 wherein the stain removing agent is selected from the group consisting of sodium stearate and sodium palmitate and combinations thereof, sodium oleate, mixtures of citric acid or lactic acid esters of monoglycerides and diglycerides, glycerol stearate, glycerol laurate and combinations thereof, sucrose monostearate, sucrose distearate, sucrose monolaurate, sucrose dilaurate, polyglycerol esters of monostearate, and polyglycerol esters of monolaurate and combinations thereof.

15. The stain removing chewing gum composition of claim 1 wherein the stain removing agent is selected from sodium stearate, sodium palmitate and combinations thereof.

16. The stain removing chewing gum composition of claim 1 wherein the stain removing agent is a mixture of organic acid esters of mono- and di-glycerides.

17. The stain removing chewing gum composition of claim 1 wherein the chewing gum composition is in the form of a slab or stick.

18. A stain removing chewing gum composition comprising a gum base core and an optional coating having at least one layer, at least one of said core and coating comprising a stain removing complex of a stain removing agent and a cyclodextrin compound, wherein said stain removing agent is present in a manner which enables an

effective amount of the stain removing agent to be released from the chewing gum composition.

19. The stain removing chewing gum composition of claim 18 wherein the
5 chewing gum composition is a centerfill chewing gum composition having a centerfill
and a gum portion, said stain removing complex being present in the centerfill, the gum
portion or both.

20. The stain removing chewing gum composition of claim 18 in the form of a
10 coated chewing gum composition wherein the stain removing complex is present in the
coating, the core or both the coating and the core.

21. The stain removing chewing gum composition of claim 20 wherein the
stain removing complex is present in the coating.

22. A method of removing stains from teeth comprising administering to the
oral cavity of a warm-blooded animal including humans an effective amount of the stain
removing chewing gum composition of claim 1.

23. A method of producing the stain-removing chewing gum composition of
20 claim 1 comprising adding the stain removing complex in one of the last steps of
forming the chewing gum composition to enable the stain removing complex to be

loosely contained with the chewing gum composition whereby the stain removing complex is effectively released upon chewing.

24. A stain removing confectionery composition comprising a stain removing
5 complex of a stain removing agent and a cyclodextrin compound, said stain removing agent being present in a manner which enables an effective amount of the stain removing agent to be released from the confectionery composition.

25. The stain removing confectionery composition of claim 24 wherein the
10 cyclodextrin compound is selected from the group consisting of α -cyclodextrin, β -cyclodextrin, γ -cyclodextrin, derivatives thereof and combinations thereof.

26. The stain removing confectionery composition of claim 25 wherein the
cyclodextrin compound is selected from the group consisting of hydroxypropyl β -
15 cyclodextrin, hydroxyethyl β -cyclodextrin, hydroxypropyl γ -cyclodextrin, hydroxyethyl γ -cyclodextrin, methyl β -cyclodextrin and combinations thereof.

27. The stain removing confectionery composition of claim 24 wherein the
molar ratio of the stain removing agent to the cyclodextrin compound is from about 1:0.1
20 to 1:10.

28. The stain removing confectionery composition of claim 27 wherein the molar ratio of the stain removing agent to the cyclodextrin compound is from about 1:0.5 to 1:5.

5 29. The stain removing confectionery composition of claim 28 wherein the molar ratio of the stain removing agent to the cyclodextrin compound is about 1:1.

30. The stain removing confectionery composition of claim 24 wherein the stain removing complex is present in an amount of from about 0.001% to 20% by weight
10 based on the total weight of the confectionery composition.

31. The stain removing confectionery composition of claim 30 wherein the stain removing complex is present in an amount of from about 0.1% to 15% by weight based on the total weight of the confectionery composition.

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32. The stain removing confectionery composition of claim 24 wherein the stain removing agent is present in an amount of from about 0.1% to 10% by weight based on the total weight of the confectionery composition.

20 33. The stain removing confectionery composition of claim 24 wherein the stain removing agent is selected from the group consisting of medium and long chain fatty acids, organic acids, organic peroxides, perbenzoic acids, anti-bacterial organic

compounds, castor oil, sulfated butyl oleate, medium and long chain fatty acid esters, ricinoleic acid and salts, sulfated butyl oleate, medium and long chain fatty acid esters and salts thereof, sodium oleate, salts of fumaric acid, potassium glomate, organic acid esters of mono- and di-glycerides, succistearin, dioctyl sodium sulfosuccinate, glycerol
5 tristearate, lecithin, hydroxylated lecithin, sodium lauryl sulfate, acetylated monoglycerides, succinylated monoglycerides, monoglyceride citrate, ethoxylated mono- and di-glycerides, sorbitan monostearate, calcium stearyl-2-lactylate, sodium stearyl lactylate, lactylated fatty acid esters of glycerol and propylene glycerol, glycerol-lactoesters of C₈-C₂₄ fatty acids, polyglycerol esters of C₈-C₂₄ fatty acids, propylene
10 glycol alginate, sucrose C₈-C₂₄ fatty acid esters, diacetyl tartaric or citric or lactic acid esters of mono and diglycerides, and triacetin and combinations thereof.

34. The stain removing confectionery composition of claim 33 wherein the stain removing agent is selected from the group consisting of glycerol-lactoesters of C₁₄-
15 C₂₀ fatty acids, polyglycerol esters of C₁₄-C₂₀ fatty acids, and sucrose C₁₄-C₂₀ fatty acid esters.

35. The stain removing confectionery composition of claim 33 wherein the stain removing agent is selected from the group consisting of sodium stearate and
20 sodium palmitate and combinations thereof, sodium oleate, mixtures of citric acid or lactic acid esters of monoglycerides and diglycerides, glycerol stearate, glycerol laurate and combinations thereof, sucrose monostearate, sucrose distearate, sucrose

monolaurate, sucrose dilaurate, polyglycerol esters of monostearate, and polyglycerol esters of monolaurate and combinations thereof.

36. The stain removing confectionery of claim 35 wherein the stain removing
5 agent is selected from sodium stearate, sodium palmitate and combinations thereof.

37. The stain removing confectionery composition of claim 24 wherein the
stain removing agent is a mixture of organic acid esters of mono- and di-glycerides.

10 38. The stain removing confectionery composition of claim 24 wherein the
chewing gum composition is in the form of a slab or stick.

39. A method of removing stains from teeth comprising administering to the
oral cavity of a warm-blooded animal including humans an effective amount of the stain
15 removing chewing gum composition of claim 1.

40. A method of removing stains from teeth comprising administering to the
oral cavity of a warm-blooded animal including humans an effective amount of the stain
removing confectionery composition of claim 24.

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